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E-learning Acceptance Among Students: Evidence from UiTM Melaka City Campus

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Abstract

COVID-19 pandemic is a global issue that change the education system from face to face to fully online teaching and learning. These changes affected the whole education system and departments from the students, lecturers, management, and suppliers. Hence, to provide an efficient and effective online learning, an investigation on factors that affect the successful of e-learning in Malaysia is deemed to be necessary. The first objective for this study is to validate the measurement items for each variable used in this study. Second objective of this study to examine the effect of instructor, accessibility, and university support on e-learning acceptance among students. This study utilized a cross-sectional study and questionnaire is the main source of information. The population of this study is students from the Faculty of Business and Management, Universiti Teknologi MARA (UiTM), Melaka Branch. From the population, a complete response is 171. To answer the research objective, SPSS was utilized, and the analyses conducted including frequency analysis, exploratory factor analysis (EFA), reliability analysis and regression analysis. From the exploratory factor analysis, all items used in this study was above 0.40 and it consider acceptable. Next, based on the regression analysis, all variables used in this study were found to be significant towards the e-learning acceptance. Hence, this showed that, instructors, accessibility, and university support play an important role for the successful of e-learning. It is also suggested that to get a clear picture on the successful of e-learning, future research to increase the number of respondents across the university and states in Malaysia.

Keywords: E-learning Acceptance, Instructor, Accessibility, University Support, COVID-19

Introduction

COVID-19, a global public health emergency, was first identified as a novel coronavirus disease epidemic by the World Health Organization (WHO) in January 2020, and then as a pandemic in March 2020. Several schools and higher education institutions were forced to close due of the COVID-19 pandemic. Because of Covid-19 pandemic, numerous schools, universities, and colleges have discontinued face-to-face instruction. This will have a detrimental impact on educational activities because social distance is so important at this period. Educational agencies are trying to find alternatives ways to manage this difficult circumstance (Dhawan,

2020). This closure boosted the rise of online educational activities, ensuring that education would not be disrupted. E-learning is defined as learning activities that take place on a variety of electronic devices, such as computers, laptops, cellphones, and other devices that have internet access. Online e-learning could be a platform that makes the process of education more flexible (Singh and Thurman, 2019).

There is a lot of changing in education system nowadays, especially in higher education institution. This change gives the biggest challenge to the whole university including management team, lecturers, and students. Internet technologies and mobile applications have transformed the education system from the traditional structure to the modern method of teaching (Sankar et al., 2020). Hence, it is important for the university in preparing a good quality of instructor or lecturers that not only competence in subject knowledge but, they must be able to engage with the technology and make an interactive session with a student. Based on Lopez-Catalam et. al (2018), e-learning could bring more confidence, reduce stress, and enhance concern and empathy. Other than that, to develop a good environment on e-learning, university support and accessibility toward technology also play an important role. Based on the research conducted by Mazalan et al (2021), the factors such as instructor, accessibility and university support are perceived as important for e-learning acceptance.

As the e-learning system has become widely used among students. Hence, the main objective for this study is to explore the effect of instructor, accessibility, and university support toward students' acceptance on e-learning. Although there might be difficulties or barriers that can negatively impact students' use of e-learning, thus, it can be improved and overcome with the cooperation of various parties. During the COVID-19 epidemic, this study intends to quantify the effects of instructors, accessibility, and university support on e-learning among students. This study also revealed the most important elements impacting the acceptance of e-learning as a teaching instrument in higher education, which could aid future efforts targeted at using e-learning not just during the pandemic but also in non-pandemic scenarios throughout the teaching career.

Literature Review

There are many drivers being examined relating to e-learning acceptance among students. Based on a recent paper published by Pham and Tran (2020), there were six factors have been considered that could affect the e-book and e-learning acceptance among students. These factors include instructor/lecturer, computer competency of the student, content, and design of course, access ability, infrastructure, and university support. However, this study aims to examine the effect of instructor/lecturer, access ability and university support among students undertaking Strategic Management course at UiTM Melaka Branch.

Instructor

The COVID-19 pandemic has forced many organizations around the world to make full use of a variety of emerging online communication platform technologies (Al-Kumaim et al., 2021). All these changes required the universities to come out with a proper strategy to make sure the platform or technologies used are suitable with all parties involved such as student, lecturer, and management. According to Benta, Bologna, and Dzitac, (2014), a system designed that offer to students, teachers, and administrators must be efficient and effective to help them create an enhanced and customized learning climate. For example, Moodle is considered a web-based flexible learning environment that facilitates collaboration between

users. Hence, as an instructor, they must be flexible in using the platform of online teaching and learning process. As a result, establishing a digital learning community among teachers is critical to provide support mechanisms for their professional development. (Izhar, Al-Dheleai, & Ishak, 2021). The creation of a team made up of people from diverse subjects looks to be able to assist teachers in identifying the areas that need to be considered when organizing technology-enabled lessons (Koh et al., 2017).

Further, to make sure the teaching and learning process at high quality, the integration of technology and support from the university and members are important. Through the platforms that subscribe by the university, teachers can upload and supply students with information and resources to which they would not have had access during face-to-face classes, and students can easily share information, state their difficulties, and receive feedback (Martín-Blas, & Serrano-Fernández, 2009). From that, universities should improve online assessment methods based on the time allocated to lecturers (Ilias et al., 2020). However, teachers' lack of familiarity with E-learning and the short time they had to adjust their teaching approach to the new circumstances (Coman et al., 2020). In this regard, the findings of a survey done by School Education Gateway at the start of the pandemic, which revealed that 66.9% of respondents said they had used online platforms for teaching for the first time, are instructive (School Education gateway, 2020). Hence, it is important for the university management to provide a comprehensive training for the lecturers to improve the skill and knowledge on online learning.

Access Ability

E-learning is the use of network technologies to create, foster, deliver, and facilitate learning, anytime and anywhere for empowering the individual learner so that the teacher/trainer/tutor is no longer the gatekeeper of knowledge, while the role of teachers is likely viewed as facilitators of knowledge process (Oye, Salleh, & Iahad, 2010). Hence, to improve the quality of teaching, there is a need to ensure a suitable medium for online learning, such as Microsoft Team, Google Meet and Zoom, that is provided by universities and effectively used by both lecturers and students (Ilias et al., 2020). In terms of obstacles encountered because of the transition from face-to-face learning to a fully virtual learning environment, students reported a decrease in wellbeing, a loss of motivation, difficulty concentrating on their studies, and Internet connectivity issues (Azlan et al., 2020)

E-Learning is one of the technical-based tuition and training platforms in telecommunication technology used to deliver information in education (Latip et al., 2020). Along with the progressive information and communication development, e-Learning is considered a paradigm in modern education. Furthermore, universities are among the organizations that have asked students, tutors, and lecturers to use several different online communication platforms to ensure the education process remains uninterrupted (Al-Kumaim et al., 2021). However, the COVID-19 pandemic has generated considerable challenges for the global higher education community while using such emerging technologies. Because these students are less rich and come from less tech-savvy households with limited financial resources, they may miss out on online classes (Sharin, 2021). They may be unable to participate due to the high costs of digital devices and online data plans. Inequality will widen because of this income disparity (Dhawan, 2020).

University Support

COVID-19 pandemic has changed the teaching and learning process for whole education system. The most challenges part in these changes is the accessibility. This is because, limitations in the form of technical issues, lack of Internet connection and insufficient data are common challenges related to online learning conducted outside the university campus (Ilias et al., 2020). A Learning Management System is seen as a software that operates and encompasses many services that are meant to aid teachers in managing their lectures and courses (Ouadoud, Nejjari, Chkouri, & El-Kadiri, 2017), and they were created to monitor and evaluate students, give grades, to monitor course attendance or additional administrative actions that can be demanded by educational institutions (Ninoriya, Chawan, & Meshram, 2011). Some of the challenges universities face, according to the Organization for Economic Cooperation and Development, include maintaining a balance between online courses, which may affect students' health due to their spending many hours in front of a screen, and non-digital activities, as well as analyzing and focusing on students' emotional health and providing them with support throughout the learning process (OECD 2020)

Further, it is important for all parties to give more attention on several aspect of the effectiveness of online and distance learning. According to Huang, Liu, Tlili, Yang, and Wang (2020), monitoring and expanding internet infrastructure to avoid delays, particularly during videoconferences; employing user-friendly tools to assist students in assimilation and comprehension of knowledge; providing dependable, interactive, and diverse electronic resources providing services that help students and teachers learn about the latest policies adopted by universities and the government, and encouraging collaboration between these institutions; using social networks to build online communities for students in order to reduce feelings of isolation; using various effective techniques such as debates or learning based on discovery and experience; providing services that help students and teachers learn about the latest policies adopted by universities and the government, and encouraging collaboration between these institutions. Technical issues are still the issues most difficult to solve, due to the capacity of the servers owned by universities. Surely, universities have made efforts to solve these problems and improve the way the E-learning platforms work (Coman et al., 2020). Still, students' technical problems remain poor internet connections, signal loss, lack of adequate digital devices, especially for students living in rural areas or students from families with low incomes. Hence, it is important for the university management to come out with a comprehensive planning and strategies to support the successful of online learning. Other than that, universities could create programs to meet these types of needs and thus facilitate the learning process for students who find themselves in these situations.

E-learning Acceptance

Oye, et al (2011) defined E-learning as a unifying term used to describe the fields of online learning, web-based training and technology delivered instructions. E-learning courses are specifically delivered via the internet to somewhere other than the classroom for enhancing or supporting learning (Elfaki, Abdulraheem, & Abdulrahim, 2019). Past investigations shown that anyplace and whenever learning and access to data and correspondence are encouraged through e-learning (Kyzy et al., 2018); Yakubu, & Dasuki, 2019). Online learning, or e-learning, provides a virtual learning environment that engages students in various activities involving a multitude of subjects through the audio-visual platform (Al-Rahmi et al., 2018). Online

learning is used for delivering information, while the database system is used for managing, communicating content, interacting or facilitating teaching and learning activities (Anshari et al., 2016)

Online learning is essential for the teaching and learning process, besides face-to-face and other traditional methods (Mokhtar et al., 2020). There are several reasons for adopting online learning, as mentioned in previous studies. Studies have noted that online learning operates using the Internet and there is no limit to the number of participants (Ghazali, & Nordin, 2018). Indeed, it is difficult to ensure the reliability of the learning services provided (Schroeder et al., 2010). That is the reason it is vital to assess students' acceptance of the e-Learning method (Latip et al., 2020). In addition, fear of technology, lack of technical skills, lack of technical support for both students and lecturer may also cause some concerns (Ali & Magalhaes, 2008). Nevertheless, e-Learning enables students to produce high-quality work and to be actively involved in alumni community activities. Educational institutions to benefit from it, by gaining an exposure and adding values to their programmed around the globe, besides responding towards IR 4.0 (Schroeder et al., 2010).

Research methodology

This study used quantitative research and questionnaire was adopted to gather the information. Population of this study is students from University Teknologi MARA, Melaka branch and all of them experienced in e-learning, undertaking Strategic Management course between September 2020 to February 2021. The required sample size for this study is 109 as suggested by G-Power. However, the number of respondents that answered the questionnaire is 171. To answer the research objective of this study, SPSS was used for analysis of data that will cover the demographic analysis, exploratory factor analysis, reliability analysis and regression analysis. Online data collection was used to gather information from the respondents. The chosen of online platform because of the covid-19 pandemic. The measurement item of this study was adapted form Pham and Tran (2020) and each item used 5-point Likert-scale.

Research findings

Demographic Analysis

Table 1 present the analysis of demographic. Based on the analysis, most of the respondents are in between 23 to 25 years old that cover 77.8% or 133 respondents, follow by 20 to 22 years old and 25 to 26 years old. In term of gender, the higher is female with 152 respondents (88.9%) and follow by male respondents with 11.1%. Next is program of study that respondent's registers. Based on the finding, the higher number of respondents are from Human Resource Management program with 36.8%, followed by Finance (28.1%), International Business (19.9%) and Office System Management (15.2%). All the respondents for this study from semester three students.

Table 1: Demographic Analysis

Demographic Questions	Category	Frequency	Percent
Age	20-22	30	17.5%
	23-24	133	77.8%
	25-26	8	4.7%
Gender	Male	19	11.1%
	Female	152	88.9%
Program	Finance	48	28.1%
	HRM	63	36.8%
	IB	34	19.9%
	OSM	26	15.2%
Semester	3	171	100%

Exploratory Factor Analysis

Factor analysis is a technique for revealing correlations between variables and condensing inter-correlated variables into a few factors. As a result, the Kaiser-Meyer-Olkin (KMO) index is used to assess the suitability of factor analysis. However, value more than 0.60 is adequate (Pallant, 2001).

Table 2: Factor Analysis

Variable	KMO and Bartlett's Test		Total Variance Explained			Rotated Component Matrix	
	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	(Bartlett's Test of Sphericity) Sig.	Item	(Initial Eigenvalue)		Component	
Total				% Of Variance		1	
Instructor	0.848	0.000	Ins_1	4.407	62.955	Ins_1	0.775
			Ins_2	0.856	12.229	Ins_2	0.533
			Ins_3	0.564	8.063	Ins_3	0.838
			Ins_4	0.480	6.853	Ins_4	0.829
			Ins_5	0.294	4.202	Ins_5	0.856
			Ins_6	0.238	3.4	Ins_6	0.802
			Ins_7	0.161	2.298	Ins_7	0.868

Access Ability	0.869	0.000	ACC_1	3.808	63.465	ACC_1	0.784
			ACC_2	0.692	11.528	ACC_2	0.878
			ACC_3	0.568	9.468	ACC_3	0.871
			ACC_4	0.384	6.406	ACC_4	0.75
			ACC_5	0.336	5.593	ACC_5	0.685
			ACC_6	0.212	3.54	ACC_6	0.796
University Support	0.798	0.000	Uni_1	2.985	74.636	Uni_1	0.82
			Uni_2	0.461	11.517	Uni_2	0.855
			Uni_3	0.359	8.983	Uni_3	0.913
			Uni_4	0.195	4.864	Uni_4	0.865
e-Learning	0.859	0.000	Learn_1	3.993	66.556	E_Lear_1	0.878
			E_Learn_2	0.888	14.803	E_Lear_2	0.856
			E_Learn_3	0.504	8.399	E_Lear_3	0.4
			E_Learn_4	0.24	4.004	E_Lear_4	0.877
			E_Learn_5	0.198	3.292	E_Lear_5	0.866
			E_Learn_6	0.177	2.946	E_Lear_6	0.901

Table 2 indicates the factor analysis result for each variable used in this study. Based on the result, the Kaiser-Meyer-Olkin (KMO) value for instructor is 0.848, access ability is 0.869, university support is 0.798, and the dependent variable which is e-learning is 0.859. Based on the result above, it is indicated that the university support is moderate with the range value of 0.70 to 0.79 and the rest of variable is Meritorious with the range value of 0.80 to 0.89. In Bartlett's test of Sphericity, a significant level 0.000 indicates that the p value is < 0.000. Therefore, the items in this variable have a strong relationship between each other.

Rotated component matrix in table 2 shown that the items for each variable load on to that individual variable only and there is no sub variable match created within variable. The result of this process, all the item loading that below 0.4 were deleted. According to Stevens (1992) and Field (2000), "recommends interpreting only factor loadings with an absolute value greater than 0.4, which means explain around 16% of the variance). Based on the result, represented all the factor loading for each item are above 0.4.

Reliability Analysis

Based on the Cronbach's alpha analysis, all variables are considered reliable because they achieved an alpha value more of more than 0.7. The result showed in Table 3, instructors has the highest Cronbach's alpha value with 0.900, followed by e-learning as a dependent variable where its alpha value is 0.885, then university support with the alpha value of 0.885, and access ability with 0.882. The items used to measure each variable were reliable and none of the items were deleted at this stage.

Table 3: Reliability Analysis

Variable		No. of Item	Cronbach's Alpha
Dependent Variable	e-learning	6	0.886
Independent Variable	Instructor	7	0.900
	Access ability	6	0.882
	University Support	4	0.885

Regression Analysis

The result in Table 5 indicates that $R = 0.783$, $R^2 = 0.613$, adjusted $R^2 = 0.606$, $F = 33.330$, $p < 0.000$. The multiple correlation coefficient between the variables, in which comprise of Instructor, Access and University Support toward the e learning is 0.783. It is indicating that the independent factor considered in the regression model are highly positively correlated with the dependent variables. The three independent factors account for 61.3% of the variance in the green purchase intention that reflecting convergent validity on the independent factors on e-learning. Hence, 38.7% of the variations in the e-learning are due to other factors do not investigate in this study. The adjusted R^2 is 0.606 indicating the result of this study is generalizable to other population. Given that the adjusted R^2 is close to the R^2 value, it represented that no overfitting of the model to the sample occurred (Hair et al., 2006). Clearly, the regression model fit the data very well. The R^2 value drop by only 0.007 in the adjusted R^2 that signifies the acceptable cross validity of this model. The F-test is 88.330 at $p < 0.000$ indicates a significant association between the variables. In viewing the B (Beta) coefficients, the positive sign on all the independent factors is an indication of a positive relationship between independent and dependent variables.

Table 5: Regression Analysis

Independent Variables	Unstandardized Coefficients (B)	Standard Error	t-Value	p-value
(Constant)	0.240	1.145	0.210	0.834
Instructor	0.248	0.051	4.858	0.000
Access Ability	0.237	0.060	3.938	0.000
University Support	0.411	0.101	4.078	0.000
R				0.783
R ²				0.613
Adjusted R ²				0.606
F				88.330
Sig.				0.000
<i>Dependent Variable: E-Learning</i>				

Based on Table 5, result represented the regression analysis. Firstly, the effect of university support toward e-learning shows the $\beta=0.411$, $t=4.078$, $p=0.000$. This indicated the highest standardized beta coefficient. Means that, university support is the most important factor in predicting e-learning. Secondly, the effect between instructors toward e-learning among student presents $\beta=0.248$, $t=4.858$, $p=0.000$. It shows that, instructors are significantly affect the e-learning acceptance among the students. Lastly, the effect of accessibility toward e-learning acceptance among student shows the beta value $\beta=0.237$, $t=3.938$, $p=0.000$. Hence, the analysis represents that, accessibility have a significant affect toward the e-learning acceptance among students. This implies, a better e-learning can be achieved or enhanced when the student has a good university support, instructor, and accessibility.

Discussions

The global landscape is becoming more muddled and uncertain leading to slow economic growth due to the COVID-19, however, this pandemic has forced global physical closure of businesses, sport activities and schools by pushing all institutions to migrate to online platforms. Based on the result above, there were three independent variables tested on e-learning among students in Melaka. University support is the most important factor in predicting e-learning while instructor and access ability show least factor.

Firstly, University support includes university library, digital and online materials, digital resources, training, academic tools, and others (Rapanta et al., 2020). This means digital and online materials are very important to ensure the successful of e-learning implementation. Students may retrieve information from digital resources which provided by the university library and others. The findings of this study revealed that, the university must ensure that the support in the form of online materials, digital resources, digital platform for online teaching and training tools are important to ensure the effectiveness of online learning.

Secondly, it has been reported that teaching quality of lecturers has a significance influence on student satisfaction (Martono et al., 2020). Thus, during online learning, instructor plays

important role in predicting e-learning interaction among students. The guidance and encouragement of the instructors can motivate students to use e-learning, by these means, they will indirectly embrace the system. Besides, engaging presentation, systematic teaching style, and friendly interaction are among the factors that encourage students to accept and encourage them to continue to use the e-learning system. This aligned with the study explored by Taat and Francis (2020) which found instructors have positive relationship towards e-learning. Thus, instructor is expected to display good and decent spirit while delivering online teaching. The positive behaviors embedded through the online learning process would influence the motivation experience by the students.

Lastly, this study also reveals that accessibility has a positive relationship towards e-learning. Universities, for example, have requested students, tutors, and lecturers to use a variety of online communication channels to guarantee that the educational process runs well (Al-Kumaim et al., 2021). The implementation of e-learning is about the accessibility and availability of internet connection and devices. Access to computers and internet connections, as well as preparatory training, are critical for teachers to begin integrating technology into their teaching and learning processes (Cheek et al., 2017).

Conclusions

Previous study has indicated that students' satisfaction in higher education is impacted by variables such as learning facilities, teaching quality and administration (Arham et al., 2021). The current COVID-19 crisis has obliged most education systems to adopt alternatives to face-to-face teaching and learning. Many education systems moved activities online, to allow instruction to continue despite school closures. The e-learning approach is very important as means of diversifying teaching and learning methods among students. This study found that the level of e-learning acceptance among students was modest and influenced by factors such as university support, instructor, and access ability. Approximately, 61% of the variation in the e-learning is being influenced by the combination of independent variables represented in this study. The usefulness and convenience of students are influenced by the quality of the system provided by the university and the information provided by the lecturers. However, technical support should be taken into consideration by the university because of external issues such as sluggish internet access, low signal, sign-in problems, less user-friendly interface in digital materials, and less attractive e-learning websites that can cause students not to use the system. Other services such as internet and Wi-Fi should be improved, as the internet is at the heart of e-learning use and acceptance. Furthermore, this study encourages lecturers to use e-learning in helping to enhance their teaching process. Apart from that, this study also increased the amount of research in the field of e-learning and provided a source of reference for other researchers to conduct further studies. Recommendations for future research is to include additional variables and involve respondents from lecturers for more comprehensive and robust information and views. Also, future research needs to investigate potential moderating variables that might influence the direct relationship between the variables in this study. Perhaps, leadership role of lecturers, student's interaction and engagement, technological literacy might be additional factors that could influence the E-learning acceptance.

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